MINUTES CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE (CTCDC) MEETING San Diego, August 12, 2004

The third CTCDC meeting of year 2004 was held in San Diego, on August 12, 2004.

Chairman John Fisher opened the meeting at 9:05 a.m. with the introduction of Committee Members and guests. Chairman Fisher thanked Joe Hull, Deputy Director, Traffic Operations, Caltrans District 11 for hosting the meeting. Joe Hull thanked the Committee for choosing District 11 facility for the meeting. The following Members, alternates and guests were in attendance:

ATTENDANCE	<u>ORGANIZATION</u>	TELEPHONE
Members (Voting)		
John Fisher Chairman	League of CA Cities City of Los Angeles	(213) 580-1189
Farhad Mansourian Vice Chairman	CA State Association of Counties Marin County	(415) 499-6570
Gerry Meis	Caltrans	(916) 654-4551
Bidget Lott	СНР	(916) 657-7222
Ed von Borstel	League of CA Cities City of Modesto	(209) 577-5266
Merry Banks	California State Automobile Association	(415) 241-8904
Jacob Babico	CA State Association of Counties San Bernardino County	(909) 387-8186
Hamid Bahadori	Auto Club of Southern California	(714) 885-2326
<u>ALTERNATES</u>	ORGANIZATION	TELEPHONE
Mark Greenwood	League of CA Cities City of Palm Desert	(760) 776-6450

ATTENDEES ORGANIZATION TELEPHONE/E-Mail

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Richard Moeur Arozona Dot / NCUTCD rcmoeur@aol.com

Mike Sallaberry

City of SF

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MINUTES

Adoption of May 6, 2004 CTCDC meeting minutes.

Motion: Moved by Jacob Babico, seconded by Ed von Borstel, to adopt the Minutes of May 6, 2004 CTCDC meeting held in San Rafael. Motion carried 8-0.

Public Comments:

Chairman Fisher asked for public comments on any item not appearing on the agenda.

There were none.

Chairman Fisher presented a certificate of appreciation to Johnny Bhullar for his excellent work in adopting the Federal Manual on Uniform Traffic Control Devices (MUTCD) 2003 along with the California Supplement. The Chairman gave a brief history on the process by saying that this task was initiated five years ago and tremendous efforts were invested by the Committee and Caltrans to achieve this task. Johnny was the center of all efforts. Johnny Bhullar thanked the Committee for recognizing his work.

Chairman Fisher asked if anyone wants to rearrange an agenda item.

Gerry Meis requested that agenda item 04-5, Roundabout Signs and Pavement Markings be moved from the "public hearing" to "discussion items" because Caltrans is still working on the final proposal.

Chairman Fisher asked Committee members whether there was any objection to moving item 04-5 under discussion items.

There were none. Item moved under discussion items.

Public Hearing:

00-1 Bicycle Pavement Marking (BPM)

Chairman Fisher stated that for agenda item 00-1 Bicycle Pavement Marking, the City of San Francisco had submitted a final report during the January 2004 CTCDC meeting and he asked Ed von Borstel to address the item.

Note: Please note that the term "Shared Lane Marking" (SLM) will be used now on instead of "Bicycle Pavement Marking" (BPM)

Ed von Borstel stated the City has submitted a final report and the report was distributed to counties and cities for comments. In addition, in the agenda packet, proposed language was included for adoption into the California Supplement.

Chairman Fisher opened a discussion among Committee members.

Hamid Bahadori stated that there is tremendous interest in the use of SLM in Southern California. The Committee is waiting to see the outcome from the National Committee on Uniform Traffic Control Devices (NCUTCD). If the National Committee's decision is far away, then the CTCDC may want to consider adoption of the device into the California Supplement. He added that there are agencies inquiring about installing SLM for experimentation. He commented that since the device has been tested, in his opinion, further experimentation would be unnecessary. He asked whether there is an update from the national committee.

Chairman Fisher stated that Mr. Richard Moeur, Chairman, Bicycle Technical Committee (BTC) of the NCUTCD was present in the meeting and he will be requested to provide an update on the status of national efforts, but first there will be discussion among Committee members.

Merry Banks stated that SLMs are proven to improve safety for bicyclists and they are well used in the City of San Francisco. She added that the Committee should take a leadership role and adopt SLM in California. This is an opportunity to provide better service to California road users.

Gerry Meis stated two concerns. First, if California adopts SLM now and then FHWA adopts a different symbol at a later date, then all SLMs placed in California would be non-standard. Second, would the California Vehicle Code need to be amended after adoption of SLMs?

Chairman Fisher responded that Mr. Richard Moeur, Chairman BTC will provide an update on the efforts of the National Committee after the CTCDC discussion.

Bridget Lott, representing the California Highway Patrol (CHP), stated that the California Code would not need to be amended with adoption of the proposed SLM.

Chairman Fisher commented that he believes California should take the lead and adopt the SLM. However, he would like to see if the same marking would be adopted by FHWA. He does not want to adopt SLM today, if FHWA may adopt a different marking at a later date California would then have a non-standard device.

Jacob Babico asked whether the SLM would supplement the bike signs. He commented that spacing for the placement of SLMs noted in the proposed language is too close for rural areas.

Chairman Fisher stated that the bike signs are used to remind a motorist that bikes may be present on the street, while the purpose of a shared lane bicycle pavement markings (SLBPMs) is to position a bicyclist so that they will not be "doored" by parked vehicles.

Hamid added that the use of SLMs would mostly be in urbanized areas, where on-street parking is allowed. Their use in rural areas would be minimal to none.

Chairman Fisher invited Richard Moeur, Department of Transportation, State of Arizona, to provide an update on the National Committee's status in regards to the adoption of the SLBPM into the MUTCD.

Richard Moeur, Traffic Design Manager, North Region Arizona Department of Transportation, stated that he also serves as Chairman of the BTC of the NCUTCD. He added that he is a voting member on the NCUTCD. The BTC has been looking at a SLBPM concept from a number of years. Late in 2001 and in early 2002, the BTC drafted language, based on the earlier SLBPMs used, for possible inclusion into the federal manual. Meanwhile, the City of San Francisco stepped forward and put together a very good quality experiment. The San Francisco technical committee considered a number of different markings during the preliminary selection of the SLBPMs and decided to use the "chevron with bike." The study included various field data and the City put together a comprehensive report. At this point, the BTC and NCUTCD have revised the original proposal and are recommending adoption the symbol used by the City of San Francisco.

Richard explained the federal process for incorporating SLM in the MUTCD. He added that FHWA has suggested that the next major revision of the MUTCD will be in 2008. The bottom line is the symbol "Chevron with Bicycle" marking is the only symbol that will be recommended to FHWA for inclusion in the MUTCD. There is a process to follow for a device to be included in the federal manual and that process will be completed by January 2006. Richard further added that there is great demand from local agencies to use SLBPMs and if there is no standard developed or adopted, then there will be different markings all over that will confuse bicyclists and motorists.

Richard stated that there is another symbol "bike in house" that has been used for a number of years, however the recommendation by the BTC and NCUTCD to FHWA will be the symbol used by the City of San Francisco. The language could be slightly different than the language included in the CTCDC agenda. Richard asked if there are any questions.

Hamid Bahadori stated that it may be fair to say that FHWA will come up with language and a symbol by the middle of 2007 which is approximately three years from today. He commented that the BTC and NCUTCD are recommending only one symbol and that is the one used by the City of San Francisco. He asked Richard if he anticipated any change from this by FHWA.

Richard responded that at this time 2008 is the likely target date to include SLBPM in the MUTCD and he do not anticipate any change to the symbol. However, the language may be slightly different than that included in the CTCDC agenda packet.

Hamid commented that since the federal process may be three years away and there is no other alternative under consideration by the NCUTCD, the CTCDC may consider adopting the SLBPM because of the great demand by local agencies.

Gerry Meis commented that most people are not aware of how long it takes to include a traffic control device in the federal manual. He added that sometimes FHWA uses a process called interim approval, and questioned whether there is a chance that this could be used for SLBPMs.

Richard responded that, at this time, the proposal to include SLM in the federal manual is following the regular process. However, local agencies could request FHWA to amend the MUTCD, based on the experiment, before the major revisions proposed for the year 2008. Or, the interim approval process could be pushed based on the results of a successful experiment.

Merry Banks asked whether the National Committee received any negative comments from other states.

Richard responded that he does not have complete data, however, when the draft is sent out for general comments to other states that will be the time when comments will be received and addressed.

Farhad Mansouiran asked, if the Committee adopts the SLBPM today in California, would this help in expediting the federal process?

Richard responded that an endorsement by any state would have a positive impact on FHWA.

Chairman Fisher thanked Richard Moeur for the update and invited James Shaffer to share his opinion on the SLBPM.

James Shaffer, attorney, stated that he is a bicyclist and an advocate for bicycle safety. Basically, he supports the concept of adopting the symbol used by the City of San Francisco. He added that the 11 feet lateral distance recommended by the San Francisco study is not adequate based on his experience. A 14 feet lateral distance from the curb line would be more desirable, because of the parking of larger vehicles such as buses and SUVs. The width of a bus from outside mirror to mirror is approximately 10 feet 4-inchs. He added that when he bicycles, he must constantly evaluate his surroundings to make lane-positioning decisions. He personally uses a 10° 4" bus width in deciding if a traffic lane is of substandard width to allow him to use the full lane. He strongly urged the Committee to increase the lateral distance over that used in the San Francisco study. He further stated that an 11-foot lateral distance is not enough, especially, when on-street parking is allowed with larger vehicles. He recommended using the parking space line to measure to the center of the SLBPM.

Some Committee members disagreed with the suggestion that the center of the SLBPM be placed a minimum 14 feet from the curb line. The experiment conducted by the City of San Francisco used an 11 feet lateral distance from the curb line if there was on-street parking, and the 11 feet distance was recommended based on the study. To change the lateral distance to 14 feet without any supporting data would not be justified and it may require a new experiment. Furthermore, the City of San Francisco study recommends a minimum 11 feet and if there is justification to provide more than 11 feet, an agency has latitude to consider that. There was a lengthy discussion on the lateral distance for the placement of SLBPM.

Michael Sallaberry, City of San Francisco, briefly responded to the comments made by James Shaffer saying that the study was conducted using videotapes and side observations to see whether door opening and the 11 feet distance was comfortable for bicyclists. Also, the 11 feet is a minimum distance and could be increased if needed.

Brain DeSousa, President, California Association of Bicycling Organization (CABO), submitted a letter to Committee members and also read it for the record as follows:

California Association of Bicycling Organizations Headquarters: PO Box 2684 • Dublin, CA 94568

August 10, 2004

Mr. John Fisher, Chairman
California Traffic Control Devices Committee
Assistant General Manager
City of LA DOT
221 N. Figueroa Street, Room 500
Los Angeles, CA 90012

Dear Mr. Fisher:

The California Association of Bicycling Organizations (CABO) is a nonprofit group of over forty clubs and organizations, including thousands of cyclists, dedicated to the improvement of conditions for all cyclists in California. For over 30 years, CABO has worked with Caltrans and other executive agencies, the state legislature, and local governments to provide a better bicycling environment in the state.

We understand that the California Traffic Control Devices Committee (CTCDC) will consider approval of the City of San Francisco's Bicycle Pavement Marking (hereinafter called "shared lane symbol") at the August 12 meeting. Although we are supportive of the shared lane symbol, we are concerned that the 11-foot number for its lateral placement from the curb (as derived from the study entitled "San Francisco's Shared Lane Pavement Markings: Improving Bicycle Safety") is inadequate to give cyclist both door zone clearance for typical large motor vehicles and adequate safe operating space when cyclists ride right down the center of the sharrow symbol.

An analysis of the door zone hazard should entail the use of wide vehicles, such as large SUVs that commonly found on California roads. In addition, the 6" shy margin from the open car door is in conflict with the AASHTO Guide to the Development of Bicycle Facilities. Quoting from the AASHTO guide, "bicyclists require at least 1.0 m (40 inches) of essential operating space based solely on their profile. An operating space of 1.2 m (4 feet) is assumed as the minimum width for any facility designed for exclusive or preferential use by bicyclists. Where motor vehicle traffic volumes, motor vehicle or bicyclist speed, and the mix of truck and bus traffic increase, a more comfortable operating space of 1.5 m (5 feet) or more is desirable" (emphasis added).

Since shared lane symbols would most likely be used in urban/suburban environments with high traffic volumes, we assert that a 5-foot lateral design cyclist width should be used for determining shared lane symbol placement. Half of this width is 2.5 feet, and this is the required lateral distance from the cyclist wheel track to the outer edge of a fully opened car door.

With these inputs we have produced our own figure similar to that from the original study. For Figure CABO-1 we use the case of a Chevy Suburban parked one foot from the curb (instead of the legal 18") with its driver's side door fully open and using the AASHTO operating space, we find that 13 feet is the required lateral placement from the curb for shared lane symbols used in the presence of on-street parking.

Although we are supportive of the shared lane symbol pavement marking, CABO is concerned that the proposed lateral placement of 11 feet from the curb gives cyclists riding along the center of the marking insufficient clearance from parked car doors. We urge the CTCDC to consider a minimum shared lane symbol lateral placement of 13 feet from the curb for those instances where these are to be used in the presence of on-street parking.

Sincerely, Brian DeSousa President, California Association of Bicycling Organizations

Brain further added that CABO is supportive of the adoption of the shared lane symbol, however, the 11-foot lateral placement from the curb is inadequate to give cyclists door zone clearance for typical large motor vehicles. In his opinion, 13 feet is an appropriate lateral distance in the presence of on-street parking.

Gerry Meis commented that the question in front of the Committee is whether to wait for FHWA to adopt the SLBPM or to move ahead with the adoption of the SLBPM in California. If the Committee recommends that the SLBPM be adopted in California, then Caltrans will work with the Committee in developing a final policy, specification for the marking and will bring it back to the Committee for final review and comments.

Hamid commented that the San Francisco study used 11-feet and is recommending a minimum of 11-feet lateral distance from the curb line to the center of the SLBPMs. If there is a need to look at different lateral distances, then new experimentation is needed. Without back-up data, the Committee cannot use an arbitrary distance as suggested.

Chairman Fisher also commented that it would not be justified to recommend a different lateral distance when the study was conducted using an 11-foot distance from the curb line. He also commented that the placement of the SLBPM in reference to the parking stall lines as suggested would not be possible, because the majority of on-street parking does not have parking stall lines. If there were concerns about the lateral distance, they should have been raised during the experimentation. At this point to suggest that the SLBPM be further out is not appropriate, because the study has been conducted and it is well documented.

Kathy Keehar, Executive Director, San Diego County Bicycle Coalition, stated that she supports the concept. It is an extra tool for public agencies to use for the safety of bicycle riders. She encouraged the Committee to adopt the SLBPM today. The Federal process is more than three years away and there is a need today to provide safety for bicycle riders. She stated that a lateral clearance of 11 feet versus 13 or 14 feet, as suggested by some of the participants, could be accommodated in the option of the proposed language. The proposed language calls for 11

feet minimum, however the language could include guidance that if a street has a steep downgrade or if the width is available, the practitioner is encouraged to consider a greater lateral distance for those conditions.

Michael Sallaberry, City of San Francisco, stated that the 11-feet is a minimum and if there is a street with a steep downgrade, the engineer might consider a greater lateral distance. The proposed language does not prohibit using more lateral distance, however, it can not be less than 11-feet.

Richard Moeur added that there were some good comments raised by individuals and the BTC is aware of and will be working on these issues. The proposal in front of the Committee is consistent to the national proposal. The National Committee will recommend including SLM and the technical guidance in the MUTCD. In addition to that, the Committee might develop a separate guideline which will address all the issues and provide detailed guidance to practitioners.

Chairman Fisher asked Richard, if the Committee adopts the SLBPM symbol and policy today, would you take this to the National Committee and encourage them to adopt California policy.

Richard responded that he will take the California proposal to the national committee and support adoption at the national level.

Chairman Fisher asked for any other comments from the public. There were no comments.

Chairman Fisher opened discussion among Committee members.

Farhad Mansourian stated that the proposal and study were discussed in detail during previous meetings. Also a report was distributed to counties and cities for comments. It was a good experiment which included a lot of different factors. In addition to that, Richard Moeur, Chairman, National Bicycle Technical Committee, confirmed that the SLM symbol before this Committee for adoption is the only symbol being considered at the national level. The proposed language also has been reviewed by the national committee. It may change slightly, however the symbol would be the same. Farhad suggested the proposed language and SLM symbol, as included in the agenda packet, be adopted in California.

Hamid Bahadori seconded Farhad's proposal.

Chairman Fisher stated that the language included in the agenda packet needs some revision and suggested changing the words "Shared Lane Marking" with "Class III Bikeway" and other minor improvements.

Michael Sallaberry stated that "Class III Bikeway" will require bike signs in addition to the BPM symbols, when shared lane markings can be used without signs.

Richard Moeur added that Class III Bikeways terminology is only used in California. He further added that agencies may use the shared lane sign. The definition of "Shared Lane" by AASHTO and in the MUTCD is that the roadway can be shared by bicycles and motor vehicles. The "Shared Lane Marking" could be used without bicycle signs and if the term "class III bikeway" is used, the bicycle sign is needed.

Chairman Fisher agreed to withdraw "Class III Bikeways" terminology and keep "Shared Lane Marking." He proposed friendly improvements to the proposed language as follows:

Section 9C.103 Shared Lane Marking

Support:

The Shared Lane Marking is intended to improve the positioning of bicyclists on roadways with significant bicycle usage and parked vehicles where the curb lanes are too narrow for motorists and bicyclists to travel side by side within the lane.

Option:

The Shared Lane Marking shown in Figure 9C-107, may be used in shared lanes to improve bicyclists' positioning on roadways, encourages cycling in the correct direction, discourage cycling on sidewalks, and to decrease motor vehicle/bicycle conflicts by informing motorists where to expect cyclists, especially on urban and suburban roadways with narrow curb lanes.

Standard:

If used, Shared Lane Marking shall be placed so that its center is a minimum of 3.4-m (11 ft) from the curb face with on-street parking.

Guidance:

On street with no on-street parking, the marking should be placed so that it directs cyclists away from conditions alongside the curb face edge that compromise cyclists' safety, such as drain grates and longitudinal gutter joints.

If used, the Shared lane Marking generally should be spaced at 75-m (250-ft) interval

Option:

The spacing may be increased or decreased based on judgement. On streets with down grades, higher speeds or wide parked vehicles the distance from the curb lane may be increased beyond 3.4 m (11 ft).

Farhad Mansourian and Hamid Bahadori agreed with the revised language and amended the motion in two parts as follows:

Motion: Part 1: Recommend that Caltrans adopt Figure 9C-107 "Chevron Bike Symbol" as a standard traffic control device in California.

Part II: Recommend that Caltrans adopt the language for Support, Option, Standard, Guidance and Option as revised by Chairman Fisher, under Section 9C.103. The language is as follows:

Section 9C.103 Shared Lane Marking

Support:

The Shared Lane Marking is intended to improve the positioning of bicyclists on roadways with significant bicycle usage and parked vehicles where the curb lanes are too narrow for motorists and bicyclists to travel side by side within the lane.

Option:

The Shared Lane Marking shown in Figure 9C-107, may be used in shared lanes to improve bicyclists' positioning on roadways, encourages cycling in the correct direction, discourage cycling on sidewalks, and to decrease motor vehicle/bicycle conflicts by informing motorists where to expect cyclists, especially on urban and suburban roadways with narrow curb lanes.

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On street with no on-street parking, the marking should be placed so that it directs cyclists away from conditions alongside the curb face edge that compromise cyclists' safety, such as drain grates and longitudinal gutter joints.

If used, the Shared lane Marking generally should be spaced at 75-m (250-ft) interval

Option:

The spacing may be increased or decreased based on judgement. On streets with down grades, higher speeds or wide parked vehicles the distance from the curb lane may be increased beyond 3.4 m (11 ft).

Motion Carried 8-0.

Action: Caltrans will take action on the Committee's recommendations and keep the Committee informed on the status.

04-4 MUTCD 2003 Revision No. 1 (Pharmacy Signing)

Chairman Fisher asked Gerry Meis to introduce agenda item 04-4 Pharmacy Signing.

Gerry pointed out that MUTCD 2003 Revision No. 1 language has been included in the agenda packet. The Pharmacy signing will be included in the federal manual effective July 21, 2004. The States have two years to adopt the policy. The pharmacy-signing requirement was included in federal legislation. The sign shall only be used to indicate the availability of a pharmacy that is open, with a State-licensed pharmacist on duty, 24 hours per day, seven days per week and it is located within 3 miles of an interchange on the Federal-aid system. Gerry stated that he personally is not supportive of the sign.

Jacob Babico stated that this sign is similar to fire station signs that are open 24 hour per day, seven days per week.

Hamid inquired whether the sign would only be applicable on freeways and would sign be required on local streets?

Gerry responded that the general practice is if a service sign is placed on a freeway, then trail-blazing signs must be installed on the local system to guide motorists to their destination.

Chairman Fisher commented that he does not support pharmacy signing because there is signing to hospitals and there does not appear to be a demonstrated need for pharmacy signs.

Chairman Fisher opened the item for public comments.

Matt Schimtz, FHWA, stated that this is the first opportunity for the Committee to take action on a MUTCD Revision following adoption of the MUTCD 2003 in California. He encourages the Committee to take action carefully, either to adopt or not adopt pharmacy signing in California. The actual implementation date is not until July 2006.

There were no other comments.

Motion: Moved by John Fisher, seconded by Gerry Meis, recommending not to adopt the MUTCD Revision No. 1, Pharmacy signing in California.

Motion Carried 8-0

Action: Item completed and closed.

Johnny Bhullar noted that the MUTCD Revision 2 is out for comments. He encouraged local agencies to review this revision and raise their concerns now because this is the time to raise concerns. Revision 2 is in regards to the minimum retroreflectivity requirements for signs.

Request for Experimentation:

04-6 Proposed School Bus Sign, "Do Not Pass Stopped School Bus Flashing Red Lights" Increased Fines Apply CVC 22454.5

Chairman Fisher asked Jacob Babico to address agenda item 04-6.

Jacob stated that the County of Ventura has requested approval to conduct an experiment with "Do Not Pass Stopped School Bus Flashing Red Lights" signs. Jacob invited Richard Herrera, County of Ventura to address the request.

Richard stated that the county of Ventura requests approval to conduct an experiment with "Do Not Pass Stopped School Bus Flashing Red Lights" signs along a six-mile stretch of Santa Rosa Street in an unincorporated area. Santa Rosa Street has two lanes, one lane in each direction with a two-way left turn lane. The residents requested installation of signs because a number of motorists do not stop when school busses flash red lights. The signs are part of an effort to educate drivers to comply with provisions of California Vehicle Code (CVC) 22454. The County will collect before data to identify violations and after data to see if the signs had a positive impact on drivers.

Chairman Fisher asked if there are any questions for Richard Herrera.

Bridget Lott commented that in the letter (in the agenda packet) there is a statement that the California Highway Patrol (CHP) has limited resources for enforcement. She did not agree with the content because the CHP does have resources for enforcement. She stated that the CHP is out all the time and sometimes CHP Officer may or may not see a violator. She further added that there is a sign on the back of School buses which states, "do not pass when red lights flashing" and a "stop signal arm" on the side of the bus which comes out to warn the drivers in both directions. In her opinion, there might be an educational need instead of creating another new stationary sign.

Hamid Bahadori asked whether the problem is only on Santa Rosa Road or do the rest of the roadways in the County have a similar problem. He further asked whether the County has conducted a field survey to find out the compliance rate. He suggested there might be an educational need.

Richard Herrera responded that the compliance rate is unknown at this point and Santa Rosa Road is a commuter route with high speeds. The issue of non-compliance was raised by local residents.

Bridget Lott commented that when the law was originally implemented there was confusion because different people interpreted the law differently. Now, the enforcement agencies are very clear about the law as well as the school bus drivers. She added that she would contact the local CHP to ask for an increase in enforcement and also reach out to local residents to educate them about the law. She also suggested that the County should consider other avenues, such as newspaper, radio and TV campaigns.

Gerry Meis asked for clarification about the law in terms of when a motorist needs to stop in both directions and when they need to stop only in one direction.

Bridget Lott read the CVC Section 22454:

22454. (a) The driver of any vehicle, upon meeting or overtaking, from either direction, any schoolbus equipped with signs as required in this code, that is stopped for the purpose of loading or unloading any schoolchildren and displays a flashing red light signal and stop signal arm, as defined in paragraph (4) of subdivision (b) of Section 25257, if equipped with a stop signal arm, visible from front or rear, shall bring the vehicle to a stop immediately before passing the schoolbus and shall not proceed past the schoolbus until the flashing red light signal and stop signal arm, if equipped with a stop signal arm, cease operation. (b) (1) The driver of a vehicle upon a divided highway or multiple-lane highway need not stop upon meeting or passing a schoolbus that is upon the other roadway. (2) For the purposes of this subdivision, a multiple-lane highway is any highway that has two or more lanes of travel in each direction. (c) (1) If a vehicle was observed overtaking a schoolbus in violation of subdivision (a), and the driver of the schoolbus witnessed the violation, the driver

may, within 24 hours, report the violation and furnish the vehicle license plate number and description and the time and place of the violation to the local law enforcement agency having jurisdiction of the offense. That law enforcement agency shall issue a letter of warning prepared in accordance with paragraph (2) with respect to the alleged violation to the registered owner of the vehicle. The issuance of a warning letter under this paragraph shall not be entered on the driving record of the person to whom it is issued, but does not preclude the imposition of any other applicable penalty. (2) The Attorney General shall prepare and furnish to every law enforcement agency in the state a form letter for purposes of paragraph (1), and the law enforcement agency may issue those letters in the exact form prepared by the Attorney General. The Attorney General may charge a fee to any law enforcement agency that requests a copy of the form letter to recover the costs of preparing and providing that copy. (d) This section also applies to a roadway upon private property.

Gerry Meis further asked whether the County has collected information from schoolbus drivers about the number of drivers who did not stop.

Richard Herrera responded no. The request to experiment is initiated based on complaints received from local residents.

There was a lengthy discussion among Committee members regarding the need for a new sign, while the school buses already display a real time message. There were also comments that the sign on the back of the bus with flashing red lights and stop signal arm is a real time message. If drivers do not obey those signs, then there may be a need for education and more enforcement.

Jacob Babico requested that the County consider collecting before data which would include violations and other efforts such as enforcement and education, then bring that information back to the Committee. He further added that the County should conduct a safety investigation as justification for the proposal.

Merry Bank stated that when the law was implemented both the Auto Clubs put together an educational brochure for the public to make them aware of the law. The County of Ventura may consider that type of campaign.

Charmin Fisher stated that there is a sign on the back of the school bus with a stop signal arm sign on the side which provide real time information. He suggested that the Committee would like to see what tools have been used to make people aware of the law. He suggested that CHP enforcement and education should be used before proposing a new sign.

Chairman fisher asked other comments. There were none.

Motion: Moved by Jacob Babico, seconded by Merry Banks, that the County of Ventura first try other avenues such as education and enforcement. If the problem still exists, then come back to the Committee with justification for the experiment.

Motion Carried 8-0.

Action: Item will be placed on a future agenda if requested by County.

99-10 Tactile Pedestrian Indicator

Chairman Fisher stated that City of Los Angles, Department of Transportation (LADOT) requested experimentation approval with tactile pedestrian indicators (TPI) five years ago. At that time, birdcalls were the only standard device approved for use in California for accessible pedestrian signals. LADOT believes that the TPI technology is a viable alternative to the bird call technology. The conclusion from the TPI experiment was that the device was helpful for visually impaired pedestrians. Tone locators are needed to alert the visually impaired to indicate the presence of the TPI devices. Meanwhile the Committee has recommended adoption of the MUTCD language along with the California Supplement. The MUTCD language allows a number of different options including TPI. Chairman Fisher asked the Committee to accept the final report submitted by LADOT and close the item.

Motion: Moved by John Fisher, seconded by Gerry Meis, that the Committee accept the report submitted by LADOT and close item 99-10 TPI.

Motion carried 8-0.

Action: Item is completed.

Discussion Item

04-5 Roundabout Signs & Pavement Markings Guidance Proposal

Chairman Fisher asked Gerry Meis to address the agenda item on roundabout signs and pavement markings (RSPM).

Gerry Meis informed the Committee that roundabout signing and pavement markings have been included in the MUTCD 2003 and adopted in the California Supplement, effective May 20, 2004. The guidance in the MUTCD 2003 does not provide enough information in regards to signs and markings. Therefore, Caltrans is proposing to provide more detail in regards to signing and pavement markings to the practitioner to keep consistency and uniformity in California. Gerry Meis invited Jerry Champa, Caltrans, to address the subject.

Jerry stated that the Department (Caltrans) is proposing to provide additional tools for the signing and pavement marking of roundabouts. A technical committee was formed 4 years ago to establish guidelines for the design of roundabouts and he was one of the members on the committee. He added that there is an 11-page draft proposal in the agenda packet with six headings. These are proposals for the California Supplement.

The first heading adds an additional educational plaque "roundabout" which will be optional. The second heading is guidance that includes a solid or broken white line to be used on the outer side of the circular roadway. There are four figures in the agenda packet, two on signing and another two on markings. In the third heading, the MUTCD Figures 3B-27 & 3B-28 were replaced with California Figures 3B-27 (CA) & 3B-28 (CA). The fourth heading includes options for roundabout intersections with two-lane approaches, channelizing lines and lane drops for roundabouts that may be considered on a case-by-case basis. Solid white channelizing lines and broken lane drop lines for roundabouts may be considered as shown in Figure 3B-28 (CA). In the fifth heading, Section 3B.16 "Stop and Yield Lines" under the support Section 3B.16, insert an "s" to the word 'layout' and "and for roundabouts" between 'highways' & the period. In the 6th heading, Figure 3B-14 (CA), example of yield line layouts are shown. Yield lines for roundabouts are staggered per the curvature of the circular roadway. The setback from right edgeline extension for roundabouts is 1.22 m (4 ft.). Figures 3B-27 (CA) and 3B-28 (CA) has detail.

Jerry Champa shared the overall concept of the proposal and stated that the Department is asking for comments and input from local agencies. The Department is also asking for comments from consultants who have experience with roundabouts and especially from cities that are operating roundabouts in their jurisdictions.

Chairman Fisher opened discussion among Committee members.

Jacob Babico asked why one approach indicates a yield line and others do not.

Jerry Champa responded because the yield line markings are optional and it was purposely left out to remind the practitioner that yield markings are optional.

Farhad Mansourian asked about the advantages of roundabouts as compared to intersections. What are the impacts to safety or capacity? Secondly, the figures indicate so many signs and markings, the entire message would be difficult for motorists to digest. He commented that the Committee should take the opportunity during the review and comments phase to reduce the signs and markings so that the motorists receive clear and less confusing information.

Jerry responded that the roundabout has been proven internationally to provide more capacity, compared to intersections with signals or all-way stop signs. About the signs and markings, the Department is asking for comments. All suggestions will be considered, and the final draft will be brought back to the Committee for consideration. Some markings, such as yield lines and outer edge lines could be eliminated.

Chairman Fisher stated that he would prefer to use sharks teeth yield pavement markings in lieu of the solid yield line. The outer edge line in that area could be eliminated and yield markings could provide delineation for the outer edge line as well as for the yield markings.

Hamid Bahadori commented that there is a need to develop standards for roundabouts. They are so popular that many local agencies already have them in operation and many others are considering roundabouts. Due to the lack of standards everyone is using their own judgement in regards to the signs and pavement markings.

Jacob commented that usually the yield markings are placed in advance of the crosswalk markings. However, in this case, the yielding markings are placed after the crosswalk. Is there enough storage for a vehicle to yield between the yield marking and the crosswalk?

Jerry responded that there would be detailed guidelines available about the storage.

Chairman Fisher commented that the educational plate "roundabout" could be eliminated. He further suggested using more symbols instead of verbal messages.

Jacob Babico commented that in his opinion roundabouts are more or less for neighborhood traffic calming.

Jerry stated that it is proven internationally that roundabouts can handle more traffic than conventional intersections with stop signs or with signals.

Ed von Borstel commented that there is a roundabout in the City of Modesto and he believes that roundabouts are more efficient than signalized intersections or stop-controlled intersections.

Chairman Fisher asked whether bicyclists are required to exit the roadway and use the sidewalk in the proximity of a roundabout.

Jerry responded no, however that is optional.

Richard Moeur commented that bicyclists are allowed to use roundabouts.

Chairman Fisher pointed out that the yellow line shown on the figures should be double yellow, however it appears to look like a single line. He further commented that he is convinced that roundabouts handle more traffic and operate smoother than an intersection. He noted that the Long Beach roundabout is very effective. He added that lane markings within the roundabout may or may not be needed. There would be a problem for lane assignment and motorists may get trapped if striping is used within the roundabout without lane assignment signs.

Jerry Champa stated that lane assignment signs could be used to alleviate confusion.

This was a discussion item, agencies are encouraged to provide comments to Caltrans. Comments may be addressed to Don_Howe@dot.ca.gov.

02-16 Traffic Signal Warrants

Chairman Fisher asked Jacob Babico to address the agenda item Traffic Signal Warrants 1 & II.

Jacob Babico stated that the item was tabled and he asked that it be placed on the agenda under discussion items. Jacob noted that the 1996 Traffic Manual "Signal Warrants I & II" do not have footnotes as were listed in the 1991 Traffic Manual. The footnote allows adding left-turn traffic volumes from the major street to the minor street volume for a Signal Warrants study. Now, the MUTCD 2003 has language which is similar to the footnotes that were listed in the 1991 Traffic Manual, however, it considers either the left turn volume of the major street or the minor street. It allows adding the two together like the 1991 footnote suggests. The MUTCD 2003 language is as follows:

MUTCD 2003, Section 4C.01

Option

At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher of the major-street left-turn volumes as the "minor street" volume and the corresponding single direction of opposing traffic on the major street as the "major-street" volume.

For signal warrants analysis, bicyclists may be counted as either vehicles or pedestrians.

Chairman Fishers stated that his interpretation of the MUTCD Section 4C.01 is that the higher left-turn volumes of the major-street can be included in the "minor street" volumes for the study.

Jacob stated that his interpretation either considers the major street left-turn volume or the minor street volume. It allows adding the two together.

It was suggested that if the MUTCD 2003 language is not clear, then the Committee should work on clarifying the language and include it in the California Supplement. The Committee asked Jacob to bring revised language, which is clearer to the end users, for the Committee's consideration.

Chairman Fisher suggested that the item be placed on the next agenda for Committee's action.

04-B Yellow Change Intervals Timing for the Signals

Chairman Fisher asked Committee Member Hamid Bahadori to address the agenda item of yellow change interval timing for signals.

Hamid Bahadori noted that the yellow change interval timing issue needs immediate attention and clear policy direction from the CTCDC, especially in light of the increasing number of automated red-light cameras being used to enforce red light violations at signalized intersections. Agencies are using different methodologies to determine the yellow timing. Since there is no definition for the approach speed in the Traffic Manual, or now in the California Supplement, the issue is what is the approach speed. Is it a posted speed limit or it is an 85-percentile speed? When a motorist receives a citation, the citation does not hold up in the court because approach speed has not been defined. The red light cameras are issuing tickets on a differential of one tenth of a second. People are challenging red light violations based on the lack of definition of approach speed. The law can be defended if there is a definition for the approach speed and minimum yellow timing for the left turn movements. Hamid referred to the State of Arizona DOT. They have a more detailed policy in regards to yellow timing for the through movement and for left turn movements. Hamid stated that the following two questions need to be addressed:

- Clarification on what is the approach speed.
- Should the same speed be used for all movements, if not, then does policy need to be established for the left turns approach?

The following Section of the California Vehicle Code (CVC) requires yellow timing at signalized intersections where such automated systems are used, to be established according to the Traffic Manual (now the California Supplement).

21455.7. (a) At an intersection at which there is an automated enforcement system in operation, the minimum yellow light change interval shall be established in accordance with the Traffic Manual of the Department of Transportation.

Gerry Meis stated that there is draft language in the agenda packet which addresses the approach speed issue. However, it does not address the left-turn movement yellow timing. This is only a draft, any suggestions and recommendations will be considered. Gerry agreed that due to red-light camera enforcement and that the CVC says the yellow interval shall be established in accordance with the Traffic Manual, this section needs improvement. He welcomed any suggestions for the improvement of the section. Gerry inquired, if a major change is recommenced to the Section, is there a need to change existing law?

Chairman Fisher stated that there is a need to clarify left-turn and right-turn yellow intervals. He also suggested flexibility so that a local agency can give more yellow time if it is needed. He added that the yellow interval should be based on the 85% percentile speed. The posted speed limit sometimes is not consistent with the 85 percentile due to political influence. If the posted speed is not consistent with the 85 percentile, then there will be a problem and more motorists may pass through the red light. It could also be a safety problem.

Hamid added that the Traffic Manual allows the use of the posted speed limit to determine the location of advance loops at signalized intersections.

Chairman Fisher invited the audience to give input.

Ahmad Rastegarpour, Caltrans Headquarters Office of ITS Development & Support, stated he believes that in determining the minimum yellow timing for a signalized intersection, appropriate judgement must be exercised. That judgment would be based upon numerous factors, including the posted speed, the 85th percentile speed (if available), the intersection geometrics, the traffic volumes, through and left turn movements, and other factors that would not be readily apparent to motorists using the intersection. To determine the yellow timing for the left-turn pocket, there is no guidance available. Therefore, a field review is needed to determine the left turns yellow timing which will be based on geometrics, left-turn pocket, the number of left turn lanes and other factors. He does not recommend a minimum yellow timing be set which would prohibit practitioners from adjustment based on field conditions.

Hamid commented that he was also not in favor of putting limitations on the flexibility for practitioners. However, since the red-light enforcement, vendors may be manipulating yellow timing to issue more red light violations. And since the approach speed is not defined, they are using their own criteria for the yellow timing. Secondly, the courts are throwing violations out because the approach speed not being defined.

Gerry Meis stated that the Department would consider all suggestions from the Committee and work with the Committee to resolve this issue. He said he was not in favor of going back to the legislature to amend the law.

Marianne Milligan, City Attorney's Office of Costa Mesa, stated that when a City adopts a document by reference such as the Caltrans Traffic Manual, the City also adopts later amendments. She commented that she does not believe that changes in the Caltrans Traffic Manual would require action by the legislature.

George Allen commented that for years their jurisdiction used 3 seconds for the left-turn lane and 4 seconds for the through movements. Since the introduction of red-light cameras, the 85-percentile speed has been used to determine the yellow timing. The 85-percentile speed was measured between the advance loop and the limit line. The 85-percentile speed was used to determine the yellow timing for the left-turn and the through traffic. In his opinion, there should be 3.2 seconds minimum for the left turns and use the table for the through movement. George added that there is a need to define the approach speed. If all agencies are using the same definition then everyone is consistent.

There was a lengthy discussion regarding the approach speed definition and the minimum yellow timing for left turns.

Hamid cited a example where if a roadway has an approach speed of 40 mph, and an agency uses a 3 second minimum yellow timing for the left turn, then a citation will not hold up in court, because there is no separate guideline for the determination of yellow timing for the left-turns. The Traffic Manual says that the minimum yellow timing is based on the approach speed, so it applies to both through and left turn movements.

Marianne stated that local agencies could defend their case if the definition of approach speed is clear. It could be an 85 percentile or posted speed limit. Approach speed must be clarified. If the Committee suggests that the left turn must use a minimum of 3.2 seconds, then all agencies will be consistent, especially when red-light cameras are used.

Farhad Mansourian suggested that this is a discussion item and regardless of what is done here today, the Committee cannot take action. He suggested forming a subcommittee to work on this and bring draft language for the Committee's consideration during the next meeting.

Chairman Fisher established a subcommittee chaired by Hamid Bahadori with the members being Farhad Mansourian, Mark Greenwood and Gerry Meis from the CTCDC. Two outside members, Marianne Milligan, City of Costa Mesa and George Allen, City of Garden Grove, were asked to provide input. The subcommittee was asked to develop draft language for the next CTCDC meeting.

04-C Neighborhood Traffic Safety Program

Chairman Fisher asked Bridget Lott to discuss the agenda item Neighborhood Traffic Safety Program (NTSP).

Bridget Lott stated that the NTSP was created to provide traffic safety in local communities. Basically, the program is a partnership with the local community to provide education about traffic safety. Bridget Lott invited John Oleinik to provide further information.

John Olejnik stated that during the last meeting information was given to Committee members about the NTSP. The Committee asked the CHP to bring the item back for discussion. Under the program, a "Warning Community Traffic Enforcement Area, Drive Safely" sign would be installed on local streets in neighborhoods that participate in the program. This is a cooperative effort between the CHP and residents of California to promote public safety, public service, and get community involvement in traffic safety and in safety education. The program was created in response to community concerns about traffic safety. The program focuses on working together in a cooperative effort to enhance public safety in communities. The NTSP places CHP resources in areas where residents desire and have specially requested an enhanced law enforcement presence. CHP involvement can include attendance at neighborhood meetings, traffic safety education, assistance in developing strategic neighborhood traffic safety plans, working with the news media to increase public awareness and enhancement of enforcement programs. This program also provides an opportunity for residents to become actively involved in traffic safety and in directing CHP resources and enforcement efforts in their community.

Farhad Mansourian commented that the second bullet under "sign utilization" on page 29 of the agenda packet states, "Individual communities must request of their local counties to provide for the installation and the maintenance of the signs" and the third bullet states, "In some instances, these NTSP signs will be placed on roadways that are state routes. State routes fall under the jurisdiction of the Department of Transportation, and therefore, the signs require the authorization of that department." Farhad stated that Gerry Meis earlier commented that the sign would not be installed on State Highways.

John responded that the CHP has purchased approximately 400 signs and half of them have been used. The installation and maintenance would be joint efforts of the CHP and local community. The program is for the unincorporated areas and the sign will not be installed on State Highways.

Chairman Fisher asked, in addition to the sign, if there were any other efforts underway to provide for traffic safety.

John Olejnik responded that CHP involvement could include attending neighborhood meetings, traffic safety education, coordination with CHP public affairs department to use news media, and flyers to educate people about traffic safety.

Chairman Fisher reminded everyone that during the May 2004 meeting, he asked the CHP to request placing this item on the agenda as a discussion item. The purpose was that there might be use for this type of sign in safety corridors.

Jacob Babico questioned who would install and maintain the signs. If the NTSP sign got knocked down or damaged by graffiti who would report and replace it. Would this sign be considered a traffic control device?

John Olejnik responded that if the sign is knocked down or damaged by graffiti, the CHP would provide a new sign. John further added that in this program the local community and the local transportation department is involved and that the local agency would keep an eye on the sign and report to the CHP or local transportation department if the sign gets damaged or knocked down. This is very much like a neighborhood watch program. The sign is not a traffic control device.

Chairman Fisher asked how long the sign would remain in place.

John Olejnik responded that the sign would stay as long as the community is involved and they want the sign up. This is not like a safety corridor, which means a two or three-year program.

Hamid Bahadori stated that if the sign is not a traffic control device, then it is not in the purview of this Committee.

The Committee agreed that the CHP Neighborhood Traffic Safety Program sign was not an official traffic control device, thus not needing experimentation. The CHP has met the statutory obligation to have the sign reviewed by the CTCDC, and are free to continue working with local transportation agencies in their installation. The signs are being posted similar to those installed for neighborhood watch programs.

Information Items

04-D Older Driver's Task Force (Older Californian Traffic Safety Task Force)

Chairman Fisher asked Gerry Meis to introduce the agenda item Older Californian Traffic Safety Task Force (OCTSTF).

Gerry Meis stated that even though this is an informational item, in the future, the OCTSTF would bring agenda items which will require action by the Committee to make changes to the California Supplement. Gerry invited Jesse Bhullar and his group to address the item.

Bridget Lott added that on behalf of the CHP Commissioner she chairs the task force and she is very familiar with the proposal. Bridget asked Kent Milton to brief the Committee on the efforts of the OCTSTF.

Kent Milton pointed out the graph on page 4 of a handout given to Committee members by Jesse Bhullar. Kent stated that based on statistics provided by the Department of Motor Vehicles (DMV) the average crash involvement per driver per 100k mile by age, the maximum age groups involved in crashes are the "teen and senior citizens." The rate of pedestrian injuries and fatalities per 100k population is also higher for senior citizens, based on a report from the California Department of Health Services.

Kent went over the organizational chart of the task force. He stated that the establishment of the OCTSTF is a joint effort of the CHP and the Center for Injury Prevention Policy and Practice at San Diego State University. The task force has diverse groups which involves both public agencies and the private sector. Members on the Committee are from different groups such as the DMV, Health Services, Aging, Transportation, Consumer Affairs, and others as well as AARP, California Council of the Alzheimer's Association, the Automobile Clubs, Commission on Aging, Congress of California Seniors, California Medical Association, California Nurse Practitioners, and others. Kent stated that his group is public affairs and his job is to promote the message of the task force and eventually implement recommendations in California.

Kent stated that the overall goal of the task force is improving traffic safety for older Californians by implementing recommendations from the report "Traffic Safety Among Older Adults." To accomplish this goal, the workgroup will be closely working with the CTCDC for implementation of the action items from the "Traffic Safety Among Older Adults" report. Kent Milton thanked the Committee for giving him the opportunity to share this with the Committee and audience, then introduced Jesse Bhullar.

Jesse Bhullar, Chief of the Office of Traffic Safety, Caltrans, stated that as Kent mentioned there are different groups working under the task force. He is chair of the Transportation Safety Workgroup (TSW). The TSW is working on the signs and markings guidelines which will accommodate older drivers and pedestrians. The task is very much focused on traffic safety issues. The goal of the TSW is to incorporate FHWA guidelines into the Caltrans design manual, provide training to promote FHWA guidelines and develop a policy that increases pedestrian priority.

Jesse stated that the group went through the FHWA guidelines and that the majority of the guidelines have been included in the MUTCD 2003. However, almost 30 recommendations from the guidelines did not make it to the MUTCD 2003. His group is reviewing and looking at which ones can be included in the design manual and others which need to be included in the California Supplement. These guidelines will not only help older drivers, but also will help increase safety for everyone. Jesse added that during the next meeting they would bring a few items for the Committee's consideration to adopt in California.

Chairman Fisher thanked Kent and Jesse for sharing information with the Committee.

Off the Agenda

Johnny Bhullar and Matt Schmitz briefed the Committee about ongoing efforts on the MUTCD and California Supplement training. Johnny stated that training schedules will be posted on the web at:

http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/index.htm

Everyone is encouraged to view the web site for schedule dates for the interested areas.

Chairman Fisher requested placement of two items on the next agenda. One is the timetable for combing the two documents into a single document, and second, pre-emption of railroad signals. This issue was discussed during the workshop on August 11, 2004.

Next Meeting: The California Traffic Control Devices Committee will meet on Wednesday, December 8, 2004. The meeting will begin at 9:30 a.m. in the Parkview Room 15-700, California Department of Transportation (Caltrans), District 4 Office, 111 Grand Avenue, Oakland, CA 94623

Adjourn: The meeting was adjourned at 3PM.